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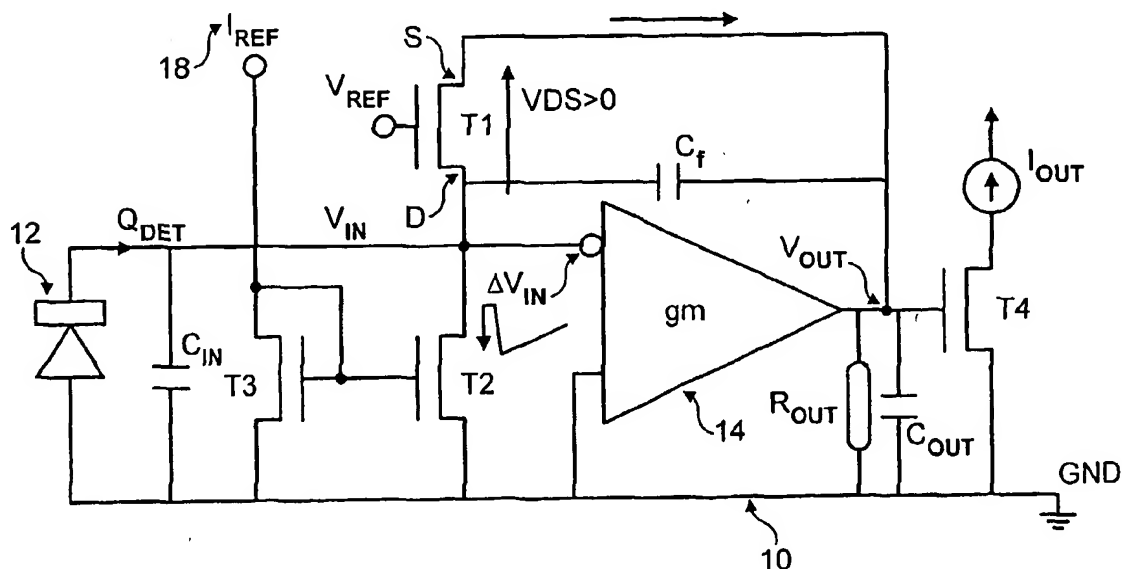
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- (71) Applicant (for all designated States except US): EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH [CH/CH]; CH-1211 Geneva 23 (CH).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): JARRON, Pierre [FR/FR]; Le Siphano 3, Les Cyclades II, Route de Genève, F-74160 Saint Julien en Genevois (FR).
- (74) Agents: ASHMEAD, Richard, John et al.; Kilburn & Strode, 20 Red Lion Street, London WC1R 4PJ (GB).
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(54) Title: CHARGE OR PARTICLE SENSING



(57) **Abstract:** A sensing arrangement for sensing charged particles and/or quanta of electromagnetic radiation has a sensor device (12) and amplifier circuitry (14). The sensor device (12) provides a sensor signal to an input mode (vin) of the amplifier (14) to cause the level at the amplifier output mode (vout) to change. A negative feedback device (T1) responds to the change in level of the output node (Vour) to vary the feedback effect to increase the loop gain of said amplifier circuitry (14). A current mirror (T2,T3) resets the input node (vin) to its initial level. Single particle and integrating sensor arrangements are disclosed.